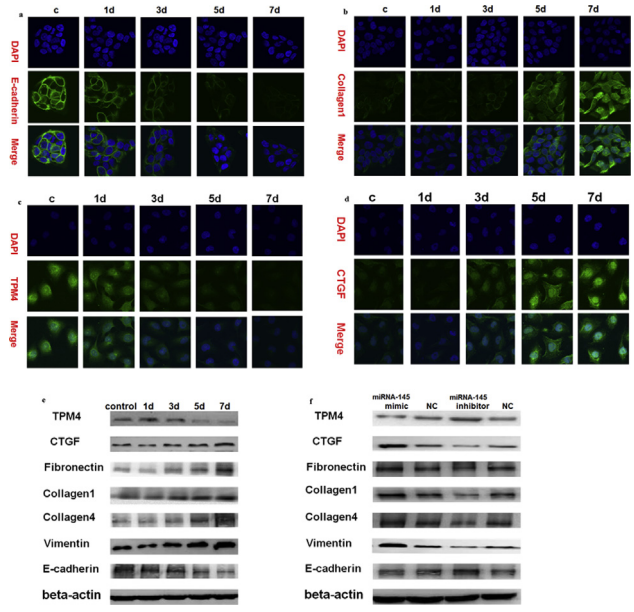


**Conclusion:** Mechanistically, miR-143/145 gene cluster were characterized to target the messenger RNA TPM4 to contribute to the cell adhesion, deformation and fibrosis.

http://dx.doi.org/10.1016/j.hkjn.2015.09.183

## 0112
## Use of Femoral Vein Cuffed Tunneled Catheter for Haemodialysis

Xinxin Jiang, Qiang He, Yiwen Li, Wei Shen, Quanquan Shen, Xiaogang Shen, Xiujun Xu
*Zhejiang Provincial People's Hospital, Hangzhou, Zhejiang, China*

**Objective:** Although arteriovenous fistula is the best choice of vascular access for hemodialysis, cuffed tunneled catheter widely used for hemodialysis in the absence of arteriovenous fistula or arteriovenous graft fistula. Indwelling a cuffed tunneled catheter in the central vein is a common vascular access for hemodialysis. To some patients who can not lie down due to heart failure or other reasons, catheterization through internal jugular vein may be exposed to an increased risk during catheterization procedure. For these patients, catheterization through femoral vein may be a good choice. In this study, we want to find the outcome of femoral vein cuffed tunneled catheter for hemodialysis.
**Methods:** From April 2013 to December 2014, 32 maintained hemodialysis patients received 34 cuffed tunneled catheters inserted through the femoral vein. There were 15 male and 17 female patients. The patients' mean age was 73.46. A 45-cm-long Covidien double lumen catheter with a Dacron cuff at 27 cm from the tip was placed in the femoral vein of each patient. The tip of catheter was in the inferior vena cava.
**Results:** All procedures of femoral vein cuffed tunneled catheter implantation were technically successful. The 6-month primary patency rate was 62.8%. The 12-month primary patency rate was 51.3%. The 6-month assisted primary patency rate was 83.5%. The 12-month assisted primary patency rate was 62.2%. The blood flow of femoral vein catheter was $240 \pm 45$ ml/min. The mean session Kt/V was $1.37 \pm 0.36$. The main complications were 1 thrombosis of femoral vein and external iliac vein, 2 stenosis of external iliac vein, and 7 femoral vein catheter related bacteraemia (3.97 episodes per 1000 CVC-days).
**Conclusion:** The femoral vein cuffed tunneled catheter could be used as a vascular access for hemodialysis.

http://dx.doi.org/10.1016/j.hkjn.2015.09.184

## 0115
## Bone Marrow-derived Macrophage-Myofibroblast Transition: A Novel Pathway in Peritoneal Fibrosis

Jianwen Yu[1,2], Xiaoru Huang[2,3], Xueqing Yu[2,3], Huiyao Lan[2,3]
[1]*Department of Nephrology, The First Affiliated Hospital, Sun Yat-Sen University, Guangzhou, China*
[2]*Li Ka Shing Institute of Health Sciences and Department of Medicine & Therapeutics, The Chinese University of Hong Kong, Hong Kong, China*
[3]*Shenzhen Research Institute, The Chinese University of Hong Kong, Shenzhen, China*

**Objective:** Patients who undergo peritoneal dialysis (PD) often develop peritoneal fibrosis that is characterized by the accumulation of myofibroblasts, but the precise origin of this fibrogenic cell type remains unknown. We recently found that $\alpha$-smooth muscle actin ($\alpha$-SMA)$^+$ myofibroblasts are co-expressing CD68 macrophage antigen in the fibrotic peritoneum. Thus, we hypothesized that macrophage-myofibroblast transition (MMT) may be a novel source of myofibroblast origin during peritoneal fibrosis, which is examined in this study.
**Methods:** Parietal peritoneal biopsy samples were collected from long-term PD patients ($n = 10$) and MMT cells were identified by CD68$^+\alpha$-SMA$^+$ cells using two-color immunohistochemistry. LysM-Cre/Rosa26$^{tdTomato}$ mice were constructed for macrophage fate mapping study in experimental PD model induced by hyperglycemic dialysis solutions. Mechanisms of MMT were studied *in vivo* using Smad3 wildtype (WT) and knockout (KO) mice.
**Results:** Immunohistochemical study showed that a minor population of $\alpha$-SMA$^+$ cells coexpressed CD68 in peritoneal biopsy tissues (5.08%). Immunofluorescence and flow cytometry results demonstrated that $>$ 90% CD68$^+$ macrophages in peritoneal tissues were labeled with the tdTomato fate marker in both control and model group. In addition, almost all tdTomato$^+$ cells ($>$ 99%) expressed with CD45 in model group, indicating that these cells were recruited from bone marrow rather than resident macrophages. Three-color confocal imaging showed that CD68$^+$tdTomato$^+\alpha$-SMA$^+$ cells amounted to 9.39% of $\alpha$-SMA$^+$ myofibroblasts in model group and these cells also expressed Collagen I. Compared to Smad3 WT littermates, the percentage of CD68$^+\alpha$-SMA$^+$ cells was remarkably reduced in Smad3 KO model group ($p < 0.001$).
**Conclusion:** Bone marrow-derived macrophages may constitute a novel source of myofibroblasts during peritoneal fibrosis. Smad3 is required for the MMT process.

http://dx.doi.org/10.1016/j.hkjn.2015.09.185

## 0133
## Relationship Among BMI, BP Control and Cardiovascular Mortality in Incident CAPD Patients

Ricong Xu, Li Fan, Liping Xiong, Naya Huang, Zhijian Li, Xueqing Yu, Haiping Mao
*Department of Nephrology, The First Affiliated Hospital, Sun Yat-sen University, Guangzhou, Guangdong, China*

**Objective**: To study the relationship between body mass index (BMI) and blood pressure (BP) control and their effect on cardiovascular mortality in continuous ambulatory peritoneal dialysis (CAPD) patients.
**Methods:** We conduct a retrospective cohort study in 1144 incident CAPD patients in our center to evaluate the association between BMI and BP control and their effect on cardiovascular mortality. The BMI was categorized using the criteria from the Working Group on Obesity in China. Binary logistic regression and the Cox's proportional hazards regression models were used to assess the relationship between BMI and uncontrolled BP, and the association of BMI and uncontrolled BP with cardiovascular mortality, respectively.
**Results**: The mean BMI was $21.74 \pm 3.17$ kg/m$^2$. Compared to patients with normal weight, those with overweight were associated with an increased risk of uncontrolled BP (OR, 1.93; 95% CI, 1.33—2.82), as well as uncontrolled SBP (OR, 1.53; 95% CI, 1.06—2.22) in the full adjusted model. During a median follow up of 26.6 months, 106 (9.3 %) patients died due to cardiovascular disease. Uncontrolled SBP was associated 96% higher risks of cardiovascular death in adjusted model (OR, 1.96; 95% CI, 1.09—3.54). Although there was no significant interaction between BMI and uncontrolled BP, individuals with concurrent underweight and uncontrolled BP (HR, 3.07; 95% CI, 1.10—8.53), as well as underweight and uncontrolled SBP (HR, 4.60; 95%